

Application No. 10/580,085
Amendment dated October 11, 2010
In Reply to Office Action dated June 9, 2010
Attorney Docket No. 4559-061539

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims

1-25 (Cancelled).

26. (New) A method for modifying the growth characteristics of a plant, comprising the steps of:

(a) transforming plant cells from a plant with a genetic construct which comprises a seedyl nucleic acid sequence which encodes a seedyl protein and which seedyl nucleic acid sequence further contains the individual sequences in the following order from N-terminus to C-terminus: (i) the sequence according to SEQ ID NO 35; (ii) the sequence according to SEQ ID NO 16; and (iii) the sequence according to SEQ ID NO 36 and (iv) the sequence according to SEQ ID NO 37, wherein the seedyl nucleic acid further consists essentially of a sequence having 90% sequence identity to a sequence selected from the group consisting of SEQ ID NOs 1, 5, and 7;

(b) expressing said seedyl nucleic acid sequence in said transformed plant cells;

(c) regenerating transgenic plants from said transformed plant cells; and

(d) identifying a transgenic plant from said transgenic plants which exhibits an increase in any or all of above-ground area, number of first panicles, number of filled seeds or total seed weight per plant compared to non-transformed plants.

27. (New) Method according to claim 26, wherein said seedyl nucleic acid is of dicotyledonous plant origin from the family selected from the group consisting of Solanaceae and Nicotiana.

28. (New) Method according to claim 27, wherein said seedyl nucleic acid is operably linked to a seed-preferred promoter.

29. (New) Method according to claim 28, wherein said seed-preferred promoter is a prolamin promoter.

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30. (New) A plant or plant cell obtained by the method of claim 26.

31. (New) A genetic construct comprising:(i) A seedyl nucleic acid encoding a seedyl protein and comprising a seedyl nucleic acid containing the individual sequences in the following order from N-terminus to C-terminus: (i) the sequence according to SEQ ID NO 35; the sequence according to SEQ ID NO 16; and (iii) the sequence according to SEQ ID NO 36 and (iv) the sequence according to SEQ ID NO 37, wherein the seedyl nucleic acid further consists essentially of a sequence having 90% sequence identity to a sequence selected from the group consisting of SEQ ID NOs 1, 5, and 7; (ii) one or more control sequences capable of regulating expression of the nucleic acid of (i); and optionally(iii) a transcription termination sequence.

32. (New) Construct according to claim 31, wherein said control sequence is a seed-specific promoter.

33. (New) A plant or plant cell transformed with a construct according to claim 31.

34. (New) Transgenic plant or plant cell according to claim 30, wherein said plant is a monocotyledonous plant such as sugar cane, or wherein the plant is a crop plant such as soybean, sunflower, canola, alfalfa, rapeseed, cotton, tomato, potato or tobacco, or wherein the plant is a cereal, such as rice, maize, wheat, barley, millet, rye, sorghum or oats.

35. (New) Harvestable parts of a plant according to claim 30, wherein said harvestable parts are seeds.